

AMENDMENTS TO THE CLAIMS:

Complete Listing of Claims

Claim 1 (canceled)

Claim 2 (canceled)

1 Claim 3. (currently amended) A gain controlled voltage controlled
2 oscillator, comprising:
3 a current controlled oscillator adapted to provide an output signal
4 oscillating at a frequency controllable by controlling a current applied thereto;
5 a first current source providing a first control current controllable by
6 controlling a voltage applied thereto that has a predetermined range;
7 a first current mirror adapted to mirror the control current to the current
8 controlled oscillator and comprising ~~A gain controlled voltage controlled~~
9 ~~oscillator as in Claim 1, wherein the first current source is a first MOS~~
10 transistor having the control voltage applied to a gate thereof and connected
11 by its source and drain between an input of the first current mirror and
12 ground; and
13 a second current source adapted to provide a second control current
14 for mirroring to the current controlled oscillator by the first current mirror when
15 the control voltage is in a low portion of the range, comprising, and wherein
16 ~~the second current source comprises:~~
17 a current source element providing a supplemental current,;
18 a second current mirror comprising a second transistor and a
19 third MOS transistor, wherein the second MOS transistor is connected
20 to the current source element and the third MOS transistor is adapted
21 to mirror the supplemental current, the third MOS transistor being

22 connected to the common connection node of the first current source
23 and the first current mirror; and
24 a fourth MOS transistor having a gate connected to the gate of
25 the first MOS transistor and being connected by its source and drain
26 between the current source element and ground.